

Investigations of physiochemical and mineralogical properties of Qazandaqy Kaolin's mine for production of tiles and industrial other ceramics

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Abstract: this research is concerned with properties and characteristics of Qazandaqy Kaolin deposit in Takestan, Qazvin Province. Physical, chemical and microstructural analysis for raw materials and treated of 1160 °C were carried out and are composed of kaolin of England, Russia and Zenoz (Marand, Iran). XRF analysis indicated the average content of 20.54% for Al_2O_3 and 55.66% for SiO_2 . XRD analysis of raw materials contains kaolin, quartz and illite phases of treated kaolin at 1160 °C designated a conversion to mulite and cristoballite. For industrial ceramic usage, low kaolin samples were selected for ceramic tests and the results indicate of suitable quality for production of tiles as well as some porcelanis.

Keywords: *Kaolin, mulite, Qazandaqy, ceramic raw materials, tile*

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